

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-56 are pending in the application. Since generic claim 1 has been allowed by the Examiner, previously withdrawn claims 5-7 are now allowed. Claims 43-45 remain withdrawn from consideration pending the allowance of generic claim 22. Claims 18-19 have been canceled.

Applicants note with appreciation that claims 1-15, 38-42 and 53-56 are allowed. Claims 33 and 52 are allowable if rewritten in independent form to include the limitations of the base claims.

Claims 22, 26-29 and 46-51 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Prasad et al. Claims 16-29 and 48-51 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Goodman and Anderson.

Claims 30-32 stand rejected under 35 U.S.C. § 103 as being obvious over a combination of Goodman and Anderson in view of Gagnon et al. Claims 34-35 are rejected under 35 U.S.C. § 103 as being obvious over Goodman and Anderson in view of Trosch. Claim 36 is rejected under 35 U.S.C. § 103 as being obvious over Goodman and Anderson in view of Yocum. Claims 37 is rejected under 35 U.S.C. § 103 as being obvious over Goodman and Anderson in view of Knox.

Among the rejected claims, claims 16 and 22 are the independent claims.

Independent claim 16 stands rejected under Section 102(e), as being anticipated by a combination of Goodman and Anderson. Applicants submit that a rejection under Section 102(e) should be based on a single reference. However, Applicants understand that the Anderson reference is incorporated by reference into the Goodman reference and the Examiner may be treating the Goodman reference as to contain the disclosure of Anderson therewithin.

Claim 16 is currently amended to add the limitations of claims 18 and 19 and to further limit the material of the fuel liner to be a low density polyethylene (LDPE) that is fluorinated either before or after being formed into the fuel liner. The Goodman reference discloses in paragraph 22 that the inner fuel liner can be made from fluorinated polymers such as poly(tetrafluoroethylene), poly(vinylidene fluoride), perfluoroalkoxy tetrafluoroethylene (PFA) and combinations thereof. LDPE is not discussed or suggested in Goodman. The Anderson reference is silent on fuel liners. Hence, Applicants submit that

amended claim 16 is patentable over the known art. Claims 17, 20 and 21 depend on claim 16 and recite further limitation therefrom, and are patentable due to their dependency.

Independent claim 22, which stands rejected under Section 102(e) over the combination of Goodman and Anderson and over the Prasad reference, has been amended to more clearly define scope of this claim. Claim 22 now recites that “the liner member, valve body member and slidable body member are made from at least two different materials, such that methanol does not significantly breakdown the members.” Support for this amendment can be found in the specification on page 9, lines 2-5, which clearly defines methanol compatibility as not being significantly reduced or broke down by methanol.

Goodman and Anderson disclose methanol compatible materials, *i.e.*, certain fluorinated polymers discussed above, only for the fuel liner. These references do not disclose such materials for the other components that may be in contact with methanol, *i.e.*, the valve body and slidable body of the valve. Goodman discusses valves on paragraph 27, which incorporates by reference the Anderson reference among other valve references. Anderson does not concern methanol or other fuel cell fuels and therefore cannot remedy the deficiency in Goodman. Thus, claim 22 as amended is patentable over Goodman and Anderson.

Claim 22 is also rejected over the Prasad reference. The Examiner in paragraph 10 of the current Office Action rejected Applicants’ argument that the materials in Prasad are not usable with methanol, and the Examiner stated that paragraph 25, line 9 of Prasad clearly states that the disclosed apparatus is useable with methanol.

Applicants respectfully traverse this holding. As stated in Applicants’ first Amendment and Reply, Prasad in paragraph 28 discloses certain suitable plastic materials for water and sodium borohydride fuels and sodium borate waste. These materials are not necessarily suitable for water and methanol fuels, which produce carbon dioxide and water byproducts.

Methanol is substantially different than sodium borohydride, and presents a different storage challenges than sodium borohydride. Methanol is a light, volatile, flammable, poisonous, corrosive liquid alcohol, and sodium borohydride is a solid metal hydride that can be made into aqueous based slurry. A simple Google search for “methanol compatible” quickly yields a number of references that provide basic, compatibility information for

methanol¹. A similar search for “sodium borohydride compatible” yields no readily usable information.

Methanex Corporation, a major manufacturer of methanol, discloses that “plastics are generally not recommended for storage [of methanol] due to long term deterioration effects and subsequent risk of contamination.” (See reference AB listed on the attached form PTO/SB/08A). Methanex recommends that only certain “components of equipment in methanol service” be made from certain “resins, nylons and rubbers, particularly nitrile (Buna-N), ethylene-propylene, Teflon and neoprene.” *Id.* (emphasis added). The Prasad reference lists none of these materials in its discussion of suitable materials for the inner liners, which comes into direct contact with the fuels. The suitable liner materials from Prasad are also different than the suitable liner materials listed in the present application. Hence, Applicants submit that one of ordinary skill in the art would not use the materials disclosed in Prasad to store methanol.

Additionally, Prasad does not disclose methanol resistant materials for the other two components recited in amended claim 22, *i.e.*, the valve body and the slidable body member.

Hence, Applicants submit that claim 22 is presently allowable over the known prior art.

Claims 23-37 and 46-52 are dependent on claim 22, including presently allowable claims 33 and 52, and recite further limitations therefrom and are presently allowable. Applicants reserve the right to address the specific rejections of the dependent claims should that becomes necessary. Furthermore, claim 22 remains generic to withdrawn claims 43-45. Hence, Applicants respectfully request that claims 43 and 45 be allowed.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

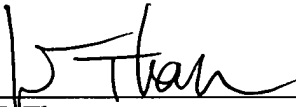
¹ Copies of relevant references uncovered by this search are submitted in an information disclosure statement submitted herewith. The Examiner is invited to review these references.

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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